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February 17, 2006

Sussex County Planning and Zoning
Sussex County Administration Building
2 The Circle, Room 147
Georgetown, De. 19947

Attn: Mr. Lawrence Lank
Director

RE: Village at Trussom Pond
PLUS Response Letter
DBF# 1231A019

Dear Mr. Lank:

This letter is in response to comments received from the Office of State Planning, dated July 20, 2005. We have revised the plan based on these comments, and our response is included for your review.

Executive Summary

*The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. **Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- *This project is proposed for an Investment Level 4 area according to the 2004 Strategies for State Policies and Spending. This project is also located outside of a designated growth area in relevant municipal and county certified comprehensive plans. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4 areas.*

Natural and Cultural Resources

- *This proposed development will have an adverse effect on cultural resources through the destruction of a historic house on Gordy Road and a known archaeological site.*
- *This project impacts layers of the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61.*
- *Run-off from this development could be detrimental to water quality and impact rare plant and animal species, as well as water-based recreation, in James Branch, Trap Pond and Trussum Pond.*
- *The northern portion of this parcel borders a protected State Resource Area: the James Branch Nature Preserve.*

We have read the Executive Summary and will respond to all of the comments that follow.

Office of State Planning Coordination – Contact Ann Marie Townshend 739-3090

This project represents a major land development that will result in 402 residential units in an Investment Level 4 area according to the 2004 Strategies for State Policies and Spending. This project is also located outside of a designated growth area in relevant municipal and county certified Comprehensive Plans. Investment Level 4 indicates where State investments will support agricultural preservation, natural resource protection, and the continuation of the rural nature of these areas. New development activities and suburban development are not supported in Investment Level 4 areas. These areas are comprised of prime agricultural lands and environmentally sensitive wetlands and wildlife habitats, which should be, and in many cases have been preserved.

From a fiscal responsibility perspective, development of this site is likewise inappropriate. The cost of providing services to development in rural areas is an inefficient and wasteful use of the State's fiscal resources. The project as proposed is likely to bring more than 1,000 new residents to an area where the State has no plans to invest in infrastructure upgrades or additional services. These residents will need access to such services and infrastructure as schools, police, and transportation. To provide some examples, the State government funds 100% of road maintenance and drainage improvements for the transportation system, 100% of school transportation and paratransit services, up to 80% of school construction costs, and about 90% of the cost of police protection in the unincorporated portion of Sussex County where this development is proposed. Over the longer term, the unseen negative ramifications of this development will become even more evident as the community matures and the cost of maintaining infrastructure and providing services increases. Because the development is inconsistent with the Strategies for State Policies and Spending, the State is opposed to this proposed subdivision.

We acknowledge that the State does not support this project because it is in a Level 4 Investment

Level. The revised plan that is enclosed with this letter shows a reduction in the number of lots from 402 to 320.

State Historic Preservation Office – Contact Alice Guerrant 739-5685

SHPO opposes this development in the Level 4 area. Development will have an adverse effect on the historic agricultural landscape and historic farmsteads through the loss of setting and introduction of noise and visual effects. It will have an adverse effect through destruction of a historic house on Gordy Rd. (S-6669) and a known archaeological site (S-7690) on the site. Beers Atlas of 1868 shows the N.J. Wooten House in the middle of the site and three other houses in or immediately adjacent on Gordy and Trussum Pond Roads. There may be archaeological sites associated with these houses remaining in the parcel. If this development proceeds SHPO requests the opportunity to document the house on Gordy Rd. prior to any demolition and to test the known archaeological site and to check for others before any construction takes place. SHPO recommends appropriate landscaping around the development to block the view from any remaining historic houses in the area.

We will work the Division of Historic and Cultural Affairs as this project moves forward. There is a proposed 30' buffer surrounding the entire project.

Department of Transportation – Contact Bill Brockenbrough 760-2109

Lacrosse Homes of Delaware seeks to develop 402 single-family detached houses on an approximately 221.36-acre assemblage of parcels (Tax Parcels 3-32-04.00-20.02, 21.00, 21.03, 26.00, 28.00, 28.02, 28.03, 28.05 and 28.06). The subject land is located southeast of Laurel. More specifically, it is on the north side of Gordy Road (Sussex Road 70) and on both sides of Trussum Pond Road (Sussex Road 462), although the part north of Trussum Pond Road would be used only for open space. The land is zoned AR-1 in Sussex County and it would be developed under the County's cluster development ordinance. A traffic impact study is in progress.

This development is proposed for an area designated as Level 4 under the Strategies for State Policies and Spending. The Strategies for State Policies and Spending have deemed the type of development being proposed inappropriate for this area. As part of its commitment to support the Strategies, DelDOT refrains from participating in the cost of any road improvements needed to support this development and is opposed to any road improvements that will substantially increase the transportation system capacity in this area. DelDOT will only support taking the steps necessary to preserve the existing transportation infrastructure and make whatever safety and drainage related improvements are deemed appropriate and necessary. The intent is to preserve the open space, agricultural lands, natural habitats and forestlands that are typically found in Level 4 areas while avoiding the creation of isolated development areas that cannot be served effectively or efficiently

by public transportation, emergency responders, and other public services.

DelDOT strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in approved Comprehensive Plans. DelDOT encourages the use of transfer of development rights where this growth management tool is available. If this development proposal is approved, notwithstanding inconsistencies with the relevant plans and policies, DelDOT will provide technical review and comments.

The preliminary traffic impact study was approved on September 28, 2005. The developer is fully aware that all improvements required by DelDOT will be at the full expense of the developer.

The Department of Natural Resources and Environmental Control Contact Kevin Coyle 739-9071

Investment Level 4 Policy Statement

This project is proposed for a Level 4 area as defined by the Strategies for State Policies and Spending and is also located outside of a designated growth area in the relevant municipal and county certified comprehensive plans. According to the Strategies this project is inappropriate in this location. In Level 4 areas, the State's investments and policies, from DNREC's perspective, should retain the rural landscape and preserve open spaces and farmlands. Open space investments should emphasize the protection of critical natural habitat and wildlife to support a diversity of species, and the protection of present and future water supplies. Open space investments should also provide for recreational activities, while helping to define growth areas. Additional state investments in water and wastewater systems should be limited to existing or imminent public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development.

With continued development in Investment Level 4 areas, the State will have a difficult, if not impossible, time attaining water quality (e.g., TMDLs) and air quality (e.g., non-attainment areas for ozone and fine particulates) goals. Present and future investments in green infrastructure, as defined in Governor Minner's Executive Order No. 61, will be threatened. DNREC strongly supports new development in and around existing towns and municipalities and in areas designated as growth zones in certified Comprehensive Plans. The use of transfer of development rights is encouraged where this growth management tool is available.

This particular development certainly compromises the integrity of the Strategies and the preservation goals inherent in many of DNREC's programs. Of particular concern are: the project impacts all three layers of the Green Infrastructure map (cropland, forest, and natural resources), the project's proximity to the James Branch Nature Preserve, and possible impacts to rare species in the James Branch, Trussum Pond, and Trap Pond. While mitigating measures such as conservation design, central wastewater systems instead of individual on-site septic systems, and

other best management practices may help mitigate impacts from this project, not doing the project at all is the best avenue for avoiding negative impacts. As such, this project will receive no financial, technical or other support of any kind from DNREC. Any required permits or other authorizations for this project shall be considered in light of the project's conflict with the Strategies for State Policies and Spending.

We acknowledge the concern regarding the development in an Investment Level 4 area.

Green Infrastructure

Portions or all of the lands associated with this proposal are within the Livable Delaware Green Infrastructure area established under Governor Minner's Executive Order #61 that represents a network of ecologically important natural resource lands of special state conservation interest. Green infrastructure is defined as Delaware's natural life support system of parks and preserves, woodlands and wildlife areas, wetlands and waterways, productive agricultural and forest land, greenways, cultural, historic and recreational sites and other natural areas all with conservation value. Preserving Delaware's Green Infrastructure network will support and enhance biodiversity and functional ecosystems, protect native plant and animal species, improve air and water quality, prevent flooding, lessen the disruption to natural landscapes, provide opportunities for profitable farming and forestry enterprises, limit invasive species, and foster ecotourism.

Voluntary stewardship by private landowners is essential to green infrastructure conservation in Delaware, since approximately 80 percent of the State's land base is in private hands. It is in that spirit of stewardship that the Department appeals to the landowner and development team to protect sensitive resources through an appropriate site design.

The design of this project incorporates numerous design features that will minimize the impact on surrounding natural features. The first part of the design is the entire northern parcel will remain as open space except for one road that will provide access to the open space. The second part is that no woodland or wetlands will be disturbed in the design of this project. The last part is that sidewalks will be located on both sides of the streets, numerous SWM facilities to provide water quality and quantity control and large tracts of active open space for all homeowners to enjoy.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on this parcel. Wetlands provide water quality benefits, attenuate flooding and provide important habitat for plants and wildlife. Vegetated buffers of no less than 100 feet should be employed from the edge of the wetland complex. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

If wetland impacts are considered, please note that impacts to wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

Site plans indicate that structures will impact a blue line stream. Impacts to streams and associated riparian wetlands are regulated by the Subaqueous Land Section from DNREC Division of Water Resources and the Army Corps of Engineers. To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

It is recommended that the Farm Services Agency of the USDA be contacted to assess whether the farmed wetlands on subject parcel meet the recognized criteria for classification as "prior converted wetlands." Prior converted wetlands are farmed wetlands that have drained or altered before December 23, 1985, and no longer meet the wetland criteria established under the 404 program. Such wetlands are considered exempt from regulatory protection provided that there is no proof of a continuous "fallow period" of five years or greater in that parcel's cropping history. Parcels converted after said date regardless of cropping history are considered jurisdictional by the Army Corps of Engineers (ACOE). The contact person for assessing a parcel's cropping history is Sally Griffin at the USDA – she can be reached at (302)678-4182.

A wetlands delineation was performed by Environmental Resources Incorporated. All of the delineated wetlands exist on the northern parcel and will remain undisturbed. No lots will be located within the wetlands. Should a wetland permit be required, we will obtain all necessary approvals for a wetland permit.

Total Maximum Daily Loads

The Watershed Assessment Section considers development in Level 4 areas or areas outside of designated growth zones, as scattered poorly-planned uncontrolled growth that threatens Delaware's quality of life and its environment. Of particular concern is how this uncontrolled growth is likely to increase nutrient runoff and hamper the State's ability to meet the nutrient reductions prescribed under the federally mandated Total Maximum Daily Load (TMDL) load program. Given these concerns and objections for building in level-four areas, the following comments are not intended to be construed as tacit approval for this project but rather minimally acceptable regulatory guidelines and/or recommendations that will help mitigate some of this expected environmental impacts.

We will comply with the TMDL for the subwatershed.

TMDLs will require nutrient load reductions of 30 and 50 percent for nitrogen and phosphorus, respectively. A nutrient budget should be prepared to verify whether these nutrients are reduced to the required level following the changed land use. Contact Lyle Jones at (302)739-4590 for further information on the acceptable protocol.

We will contact Lyle Jones to help with the preparation for a nutrient budget to ensure that the load reduction for nitrogen and phosphorus are met.

The TMDL for the Nanticoke River watershed mandates reducing nutrient loading to waters of the Nanticoke and significant nitrogen and phosphorus loading must be realized from all sources, including individual onsite wastewater systems. The Department has developed performance standards for on-site wastewater treatment and disposal systems that are being considered as a part of the Pollution Control Strategy (PCS). If ultimately adopted, wastewater systems will be required to meet the appropriate nitrogen concentrations specified in the PCS.

The community on-site disposal system will meet the specifications as part of the PCS for the Nanticoke subwatershed.

As of April 11, 2005, stormwater best management practices must also consider water quality as well as quantity in impaired water bodies. This action will help achieve the required TMDL reductions for the Broad Creek subwatershed.

Water quality is an integral component of the proposed stormwater management practices.

Impervious Cover

The applicant should reduce imperviousness to the greatest degree practicable. Use of pervious paving materials in lieu of asphalt or concrete and planting trees, are examples of practical ways the applicant could help reduce surface imperviousness on this parcel. Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline.

We will attempt to minimize the impervious cover to the maximum extent possible.

Water Supply

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising. Should you have any questions concerning these comments, please contact Rick Rios at (302)739-9944.

Should dewatering be required, we will obtain all necessary permits from the Water Supply Section.

Sediment and Erosion Control/Stormwater Management

1. A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through Sussex Conservation District. Contact Jessica Watson, Program Manager, at (302)856-7219 for details regarding submittal requirements and fees.

A detailed Erosion and Sediment Control Plan will be designed and submitted to the Sussex Conservation District for their review and approval.

2. It is strongly recommended that you contact Sussex Conservation District to schedule a pre-application meeting to discuss the sediment and erosion control and stormwater management components of the plan. The site topography, soils mapping, pre and post development runoff, and proposed method(s) and location(s) of stormwater management should be brought to the meeting for discussion.

A pre-application meeting will be scheduled with the District during the design of this project.

3. A Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity must be submitted to DNREC Division of Soil and Water Conservation along with the \$195 NOI fee prior to plan approval.

A Notice of Intent will be filed with DNREC prior to final plan approval.

4. Applying practices to mimic the pre-development hydrology on the site, promote recharge, maximize the use of existing natural features on the site, and limit the reliance on structural stormwater components, such as maintaining open spaces, should be considered in the overall design of the project as a stormwater management technique.

Open space is a key component to the design of this project and the post-development hydrology will mimic the pre-development hydrology and will be designed to meet DNREC's requirements.

5. Each stormwater management facility should have an adequate outlet for release of stormwater. Any drainage conveyed onto this site from neighboring properties must be adequately conveyed through the site to the discharge point without interruption.

Each stormwater management facility will have an adequate outfall and off-site drainage will be incorporated into the overall design of this project.

6. Clearly address how Stormwater Quality and Quantity Treatment will be provided. If this project is eligible for a Quantity Waiver, please make the request in the stormwater narrative citing the specific regulation.

A narrative in the stormwater management report will address all of the above concerns.

7. Please indicate on the sediment and stormwater management plan who shall be responsible for maintenance of the stormwater management facilities both during construction and after. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements) of any structures or facilities.

Maintenance of all stormwater management ponds will be incorporated into the design. Maintenance responsibilities will be clearly defined on all appropriate plans.

8. If a stormwater management pond is going to be utilized as a sediment trap/basin during construction it must be designed to accommodate 3600 cubic feet of storage per acre of contributing drainage area until project stabilization is complete.

We will ensure that all ponds that will act as sediment basins will be sized appropriately.

9. All ponds are required to be constructed per pond code 378.

All ponds will be constructed in accordance with Pond Code 378.

10. Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval. Please address.

Wetlands will not be disturbed as part of this project. However, if a permit is required we will obtain all necessary permits prior to receiving final approval.

11. A Certified Construction Reviewer (CCR) is required for this project.

We acknowledge that a Certified Construction Reviewer is required for this project. A note stating

this will be added to the E&S Plans.

12. The District will require a phased plan and sequence of construction for this project. DNREC regulations require no more than 20 acres to be disturbed at more time. Please address.

This project will be phased so that no more than 20 acres can be disturbed at a time.

13. Under the DNREC Health and Safety Memo of 2000, all wet ponds are required to have an open space depth of 3 feet or more that comprises 50-75 percent of the area of the pond.

If wet ponds are designed for this project, we will ensure that the 3' of open water will comprise of 50 to 75 percent of the permanent pool.

14. Consideration should be made for any adjacent properties during the design of this project, including drainage and erosion/sediment control.

We will consider adjacent properties during the design of the project.

Drainage

The Drainage Section requests all existing ditches on the property be checked for function and cleaned if needed prior to the construction of homes. Wetland permits may be required before cleaning ditches. The Drainage Section requests that all precautions be taken to ensure the project does not hinder any off site drainage upstream of the project or create any off site drainage problems downstream by the release of on site storm water.

We will ensure that all existing drainage facilities are adequately sized and functioning.

The Drainage Section strongly recommends any drainage conveyance between two parcels within a subdivision be dedicated as a drainage easement and such easement be designated as passive open space, not owned by individual landowners. The easement should be of sufficient width to allow for future drainage maintenance as described below.

- Along an open ditch or swale, the Drainage Section recommends a maintenance equipment zone of 25 feet measured from the top of bank on the maintenance side, and a 10-foot setback zone measured from top of bank on the non-maintenance side. These zones should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species, selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be native species spaced to allow for drainage maintenance at maturity. Trees should not*

be planted within 5 feet of the top of ditch to avoid future blockages from roots.

- *Along a stormwater pipe the Drainage Section recommends a maintenance equipment zone of 15 feet on each side of the pipe as measured from the pipe centerline. This zone should be maintained as buffers to aid in the reduction of sediment and nutrients entering into the drainage conveyance. Grasses, forbs and sedges planted within these zones should be native species selected for their height, ease of maintenance, erosion control, and nutrient uptake capabilities. Trees and shrubs planted within the maintenance zone should be spaced to allow for drainage maintenance at maturity.*

All drainage easements will be shown on the record plan and labeled accordingly.

The Drainage Section recommends any drainage/utility easement owned by an individual landowner should not have structures, decks, buildings, sheds, kennels, fences or trees within the drainage easement to allow for future drainage maintenance.

The developer may include a restriction regarding items that will be allowed or not allowed in a drainage easement.

Open Space

Site plans show an area of community open space within the middle of this development. In many cases, large open space areas abutting back yards are not well used by the community and are expensive to maintain. It is recommended that open space is relocated along the western wooded areas. Enlarging and enhancing this community open space area will increase its value for birds and wildlife and create recreational opportunities for residents by allowing all residents access to and views of the forest. It may also help reduce the long term cost of open space maintenance for the community.

In areas set aside for passive open space, the developer is encouraged to consider establishment of additional forested areas or meadow-type grasses. Once established, these ecosystems provide increased water infiltration into groundwater, decreased run-off into surface water, air quality improvements, and require much less maintenance than traditional turf grass, an important consideration if a homeowners association will take over responsibility for maintenance of community open spaces. It is suggested that the developer target the northern portion of the project site for such activities. Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

The open space has been redesigned so that all open space will be usable and accessible to everyone in the subdivision.

Rare Species

DNREC has not surveyed this parcel and there are currently no records of state-rare or federally listed plants, animals or natural communities at this project site. However, there are records of numerous rare species within James Branch, Trussum Pond, and Trap Pond. Run-off from this development could be detrimental to water quality and not only would this affect plant and animal species, but could interfere with water based recreation. Both Trap and Trussum Ponds are state-owned and management by the Division of Fish and Wildlife. The degraded water quality in both of these ponds has prevented some forms of water based recreation in recent years. Therefore, rigorous sediment and erosion control procedures should be implemented not only during construction but after this site is built out. There is a high potential for nutrient enrichment of surrounding waters from lawn care practices. A 100ft vegetative buffer comprised of native grasses, shrubs, or wildflowers along the perimeter of the project will aide in controlling run-off and trash from this development.

A detailed erosion and sediment control plan will be designed for this project. The parcel to the north which abuts State Land will remain entirely as open space.

Nuisance Waterfowl

The ponds planned for the subdivision will likely attract waterfowl like resident Canada geese and mute swans. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. DNREC recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number and/or size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

The stormwater management facilities will be designed to discourage nuisance waterfowl.

State Resource Area/Buffers

The northern portion of this parcel borders a protected State Resource Area: the James Branch Nature Preserve. State Resource Areas include lands held in conservation by various groups as well as lands targeted for conservation and preservation efforts. These areas are thought to have particular conservation value. The wetlands and woodlands along this tract provide valuable wildlife corridors connecting to vast areas of conservation land. To ensure adequate buffering, the

developer is encouraged to provide a minimum of 100 foot un-mowed buffers along the nature preserve. If possible, the developer should seriously consider reforesting this buffer.

The entire northern parcel will remain as open space.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 30.9 tons (61,702.8 pounds) per year of VOC (volatile organic compounds), 25.5 tons (51,085.7 pounds) per year of NOx (nitrogen oxides), 18.8 tons (37,692.0 pounds) per year of SO2 (sulfur dioxide), 1.7 ton (3,355.2 pounds) per year of fine particulates and 2,580.7 tons (5,161,361.0 pounds) per year of CO2 (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 12.4 tons (24,887.5 pounds) per year of VOC (volatile organic compounds), 1.4 ton (2,738.4 pounds) per year of NOx (nitrogen oxides), 1.1 ton (2,272.5 pounds) per year of SO2 (sulfur dioxide), 1.5 ton (2,932.5 pounds) per year of fine particulates and 50.4 tons (100,888.5 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 4.9 tons (9,863.6 pounds) per year of NOx (nitrogen oxides), 17.2 tons (34,308.3 pounds) per year of SO2 (sulfur dioxide) and 2,530.2 tons (5,060,472.5 pounds) per year of CO2 (carbon dioxide).

	VOC	Nox	SO2	PM2.5	CO2
Mobile	30.9	25.5	18.8	1.7	2580.7
Residential	12.4	1.4	1.1	1.5	50.4
Electrical Power		4.9	17.2		2530.2
Total	43.3	31.8	37.1	3.2	5161.3

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 4.9 tons of nitrogen oxides per year and 17.2 tons of sulfur dioxide per year. A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

"ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

- *building envelope upgrades,*
- *high performance windows,*
- *controlled air infiltration,*
- *upgraded heating and air conditioning systems,*
- *tight duct systems and*
- *upgraded water-heating equipment."*

The energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. DNREC recommends this project development and other residential proposals increase the energy efficiency of their homes.

A landscape plan will be designed for this project to help mitigate the concern for air quality.

State Fire Marshal's Office – Contact Duane Fox

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. Fire Protection Water Requirements:

- *Where a water distribution system is proposed for single family dwelling it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.*
- *The infrastructure for fire protection water shall be provided, including the size of water mains.*

b. Accessibility:

- *All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Trussum Pond Rd and Gordy Road must be constructed so fire department apparatus may negotiate it.*
- *Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.*
- *Any dead end road more than 300 feet in length shall be provided with a turnaround or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn*

around.

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

c. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

d. **Required Notes:**

- Provide a note on the final plans submitted for review to read " All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations"
- Name of Water Supplier
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from www.delawarestatefiremarshal.com.

We will contact the State Fire Marshal for a pre-application meeting during the design of this project. In addition, the plan will meet all applicable State Fire Regulations.

Department of Agriculture - Contact Milton Melendez 698-4500

The Delaware Department of Agriculture opposes the Truitt Dukes application due to the project's proximity to properties that have high agricultural value. The Department of Agriculture encourages the use of this property to be consistent with that of the surrounding agricultural parcels. The project is also located in a Level 4 area, on which the State of Delaware promotes agricultural and natural resource preservation.

The Delaware Forest Service in cooperation with the Office of State Planning recognizes that this proposed development falls within a Level 4 area. As defined, a Level 4 area is one least likely to receive any state monies to support the need infrastructure to sustain this proposed community. The Delaware Forest Service reserves the right to comment on this development at this time for the following reasons: the proposed subdivision falls within high value agricultural and forestry lands that are targeted by the state for future preservation activities. In addition, it falls within existing preserved lands under management by the Division of Parks and Recreation. This proposed

development may hinder future management activities by the Division. The Delaware Forest Service encourages the developer to seek other use for this site that is supportive of the agriculture resources found in and around this site. The Delaware Forest Service offers its assistance to develop these new uses, to learn more please contact the offices at (302) 349-5754.

We acknowledge the concern of the Department of Agriculture regarding the Level 4 Investment Area.

Public Service Commission - Contact Andrea Maucher 739-4247

For both water and wastewater, the application notes "Tidewater Utilities." However, the project is not within one of its certificated service areas. Tidewater will need to apply to the Commission for a Certificate of Public Convenience and Necessity (CPCN). Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines.

A CPCN was petitioned with the PSC and approved.

Delaware State Housing Authority – Contact Jimmy Adkins 739-4263

This proposal is to develop 402 units on 221 acres located north of the intersection of Gordy and Wooten Roads, and on either side of Trussum Pond Road, between Trap Pond State Park, and the James Branch Nature Preserve, southeast of Laurel. According to the Strategies for State Policies and Spending, the proposal is located in a Level 4 area and outside the growth zone. As a general planning practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as Level 1 and 2 areas outlined in the Strategies. The proposal is located in an area targeted for agricultural and natural resource protection, and therefore inconsistent with where the State would like to see new residential development.

We acknowledge the Delaware State Housing Authority's concern regarding the Level 4 Investment Area.

Sussex County - Contact Richard Kautz

Add the required 30 foot "forested buffer strip" around the n/f Hastings chicken farm.

A 30' forested buffer strip has been added around the Hasting's chicken farm.

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves

the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included under Ordinance Number 1152 (County Code 99-9C). These issues can be addressed by including in the application an explanation of how the developer plans to mitigate the issues raised by the State agencies.

The Homeowners Association will be responsible for all the open space of the project. The Homeowners Association would in turn contract with MRA Property Management, Inc. (MRA PMI) to manage the affairs of the HOA. MRA PMI will answer to the Board of Directors of the HOA, which will be elected and operate pursuant to the By-Laws of the HOA entity. The intent of MRA PMI is to manage the contracts and performance of the open space maintenance to reduce the burden of the HOA. In addition, we will address the specific items of 99-9C during the public hearing.

This fiscal year Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected. Any well location should insure that the wellhead protection area is entirely on site.

We will comply with the Source Water Protection Program should the program be approved by Sussex County.

The project proposes to develop using a private central community wastewater system. We recommend that the wastewater system be operated under a long-term contract with a capable wastewater utility that meets TMDL limits for Nanticoke River Watershed. The proposed project is located outside of any planning areas where Sussex County expects to provide sewer service. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A review of the treatment and disposal system by the Sussex County Engineering Department is also required. If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or homeowners association expense. For questions regarding these comments, contact Chris Calio, Sussex County Engineering Department at (302) 855-7839.

The gravity sewer system and pump station will meet the requirements of Ordinance 38. In addition, the developer will enter into a long term agreement with Tidewater Environmental Services for the community system.

Mr. Lawrence Lank
February 17, 2006
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The above responses to each comment serves as an official response from Davis, Bowen & Friedel, Inc. On behalf of our client, Lacrosse Homes, we thank you for your review and comments for this project. If you have any questions or comments, please contact me at (302) 424-1441 or email me at rwl@dbfinc.com.

Sincerely,



Ring W. Lardner
Civil Engineer

RWL\dnw

M:\files\developer\1231\A019

Enc.

Cc: **Constance Holland, AICP, Office of State Planning**
John Dixon, Lacrosse Homes
Kim Burke, Lacrosse Homes